

Thursday mornings MRes project progress report

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Date Time: 18-Jun-2020 09:00
Location: MS Teams
People: James, Samraat, PokMan

1 Topics discussed

1. 20200615.pdf
2. log (total & organic carbon pool) carbon distributions at steady state
3. log total carbon distribution at steady state with/without harvest

2 Consensus

1. root parameter values with feasible distributions (Gaussian/Normal with variance as std-error?)
2. Latin hypercube sampling (LHS; after having parameter samples)
3. analytical solve 4 variations of the model: (P+B/P-only)vs(harvest/no) [SP,PH]
4. literature search on model papers, see how others address “clearance rate” g_B in published models [SP,PH]
5. get g_B without usage of substrate concentration [SP,PH]

3 Extra

- project title: Carbon harvest maximised by a theoretical phytoplankton and bacteria system
- research Q: Is P+B better than P-only in C-harvest?
- hypotheses
 1. Stable yield harvest: P+B harvest more than P
 2. Stable yield harvest: continuous harvest yield more than whole system take down
 3. Biological features have significant impact on total C-harvest
- statistical tests: Wilcoxon & (two-way) Kruskal